

NMCP COVID-19 Literature Report #28: Friday, 10 July 2020

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Purpose: These reports are curated collections of current research, evidence reviews, and news regarding the COVID-19 pandemic; they are biweekly, planned for Tuesdays and Fridays. Please feel free to reach out with questions and suggestions for future topics.

All reports are available online at <https://nmcp.libguides.com/covidreport>. Access is private; you will need to use the direct link or bookmark the URL, along with the case-sensitive password "NMCPfinest".

Disclaimer: I am not a medical professional. This document is current as of the date noted above. While I make every effort to find and summarize available data, things are changing rapidly, with new research and potentially conflicting literature published daily.

Statistics

Global 12,294,117 confirmed cases and 555,531 deaths in 188 countries/regions

*United States**

top 5 states by cases (Virginia is ranked 15th)

	TOTAL US	NY	CA	TX	FL	NJ
Confirmed Cases	3,118,168	399,513	302,484	236,541	232,718	174,270
Tested	38,032,966	4,468,016	5,078,434	2,313,212	2,357,398	1,599,417
Recovered	NA	71,279	NA	118,326	NA	30,938
Deaths	133,291	32,283	6,859	3,006	4,009	15,448

*see census.gov for current US Population data; NA: not all data available

[JHU CSSE](https://jhu-csse.org) as of 1100 EDT 10 July 2020

<i>Virginia</i>	Total	Chesapeake	Hampton	Newport News	Norfolk	Portsmouth	Suffolk	Virginia Beach
Cases	68,931	1,162	454	679	1,360	627	526	1,663
Hospitalized	6,675	156	40	46	123	83	67	133
Deaths	1,958	22	4	10	15	18	42	30

[VA DOH](https://va.doh.gov) as of 1100 EDT 10 July 2020

Navy statistics, previously provided via Navy Live blog, will no longer be included as they are only updated weekly: "Beginning Monday, June 22, this daily update will transition to a once-weekly update". See: <https://navylive.dodlive.mil/2020/03/15/u-s-navy-covid-19-updates/>

Selected Primary Literature

Recent—published in peer-reviewed journals since last report

[MMWR](#): Increases in Health-Related Workplace Absenteeism Among Workers in Essential Critical Infrastructure Occupations During the COVID-19 Pandemic — United States, March–April 2020 (10 July 2020)

"Syndromic methods for monitoring illness outside health care settings, such as tracking absenteeism trends in schools and workplaces, can be useful adjuncts to conventional disease reporting in the pandemic setting.

Whereas the overall impact of COVID-19 on health-related workplace absenteeism in March and April was minor, increases in absenteeism in personal care and service, healthcare support, and production occupations, groups that contain or define essential critical infrastructure workforce categories, highlight the risks and concerns surrounding occupational transmission of SARS-CoV-2.

Collection of additional occupational data in COVID-19 surveillance might help better understanding of the occupational risk and impact of COVID-19 and identify intervention opportunities."

[MMWR](#): Provision of Pediatric Immunization Services During the COVID-19 Pandemic: an Assessment of Capacity Among Pediatric Immunization Providers Participating in the Vaccines for Children Program — United States, May 2020 (10 July 2020)

"Declines in routine childhood immunization coverage have been reported during the COVID-19 pandemic.

A May 2020 survey of 1,933 practices participating in the Vaccines for Children program found that 1,727 (89.8%) were currently open, including 1,397 (81.1%) offering immunization services to all pediatric patients. Among responding practices, 1,135 (59.1%) were likely able to provide immunization services to new pediatric patients if necessary.

Practices appear to have the capacity to deliver routinely recommended vaccines, allowing children who have missed vaccine doses because of the pandemic to catch up. Practices that are unable to provide immunization services should refer patients to other practices."

[Ann Am Thorac Soc](#): Association of Black Race with Outcomes in COVID-19 Disease: A Retrospective Cohort Study (09 July 2020)

"Our study examines the association of race with SARS-CoV-2 infection, hospitalization, and mortality among all subjects tested for SARS-CoV-2. These data suggest that Blacks are more likely to test positive and be hospitalized with SARS-CoV-2; however, we found no difference in mortality for Blacks vs non-Blacks. Possible hypotheses for these disproportionately high rates among Blacks include disparities in predisposing medical

conditions, health insurance status, and access to medical care. Although we adjusted for residential zip code, we were unable to adjust for preexisting inequities of socioeconomic status and other critical social determinants of health, which could account for these findings. Crowded home settings, care facilities for the elderly, over-representation in lower-wage public service occupations, and underlying comorbidities could conceivably increase the susceptibility of Black subjects to SARS-CoV-2 infection, raising the pre-test probability of death from severe COVID-19. Despite this higher risk, the absence of actual racial differences in mortality may imply that our conceptual categories of race reflect health care disparities and environmental risk factors more closely than any perceived biological differences."

[JAMA Netw Open](#): Incidence of Stress Cardiomyopathy During the Coronavirus Disease 2019 Pandemic (09 July 2020)

"Question: Is psychological, social, and economic stress associated with coronavirus disease 2019 (COVID-19) associated with the incidence of stress cardiomyopathy?

Findings: This cohort study included 1914 patients with acute coronary syndrome to compare patients presenting during the COVID-19 pandemic with patients presenting across 4 timelines prior to the pandemic and found a significantly increased incidence of 7.8% of stress cardiomyopathy during the COVID-19 pandemic, compared with prepandemic incidences that ranged from 1.5% to 1.8%.

Meaning: These findings suggest that psychological, social, and economic stress related to the COVID-19 pandemic was associated with an increased incidence of stress cardiomyopathy."

[Lancet Child Adolesc Health](#): Intensive care admissions of children with paediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2 (PIMS-TS) in the UK: a multicentre observational study (09 July 2020)

"This multicentre observational study is the largest cohort of critically ill children with PIMS-TS reported so far, the first nationwide report, and, to the best of our knowledge, the first to describe longitudinal data. Coronary artery abnormalities were seen in a third of cases. Comparisons with historical data indicate at least an 11-fold increase in intensive care admissions for children with an inflammatory syndrome during a 6-week period in April–May, 2020.

A small but important number of children in the UK are requiring critical care admission for an unexplained multisystem inflammatory syndrome that might be associated with the COVID-19 pandemic. Uncertainties about the underlying basis of this syndrome and lack of evidence about optimal treatments and follow-up have led to considerable variation in clinical management. Urgent efforts to recruit patients to robust clinical trials of potential

treatments to reduce longer-term morbidity (eg, coronary artery aneurysm formation and evolution) are needed to inform clinical practice."

[NEJM](#): Pulmonary Vascular Endothelialitis, Thrombosis, and Angiogenesis in Covid-19 (09 July 2020)

"We examined 7 lungs obtained during autopsy from patients who died from Covid-19 and compared them with 7 lungs obtained during autopsy from patients who died from acute respiratory distress syndrome (ARDS) secondary to influenza A(H1N1) infection and 10 age-matched, uninfected control lungs. The lungs were studied with the use of seven-color immunohistochemical analysis, micro-computed tomographic imaging, scanning electron microscopy, corrosion casting, and direct multiplexed measurement of gene expression.

In patients who died from Covid-19-associated or influenza-associated respiratory failure, the histologic pattern in the peripheral lung was diffuse alveolar damage with perivascular T-cell infiltration. The lungs from patients with Covid-19 also showed distinctive vascular features, consisting of severe endothelial injury associated with the presence of intracellular virus and disrupted cell membranes. Histologic analysis of pulmonary vessels in patients with Covid-19 showed widespread thrombosis with microangiopathy. Alveolar capillary microthrombi were 9 times as prevalent in patients with Covid-19 as in patients with influenza ($P<0.001$). In lungs from patients with Covid-19, the amount of new vessel growth — predominantly through a mechanism of intussusceptive angiogenesis — was 2.7 times as high as that in the lungs from patients with influenza ($P<0.001$).

In our small series, vascular angiogenesis distinguished the pulmonary pathobiology of Covid-19 from that of equally severe influenza virus infection. The universality and clinical implications of our observations require further research to define."

[Brain](#): The emerging spectrum of COVID-19 neurology: clinical, radiological and laboratory findings (08 July 2020)

"Preliminary clinical data indicate that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection is associated with neurological and neuropsychiatric illness. Responding to this, a weekly virtual coronavirus disease 19 (COVID-19) neurology multi-disciplinary meeting was established at the National Hospital, Queen Square, in early March 2020 in order to discuss and begin to understand neurological presentations in patients with suspected COVID-19-related neurological disorders. Detailed clinical and paraclinical data were collected from cases where the diagnosis of COVID-19 was confirmed through RNA PCR, or where the diagnosis was probable/possible according to World Health Organization criteria. Of 43 patients, 29 were SARS-CoV-2 PCR positive and definite, eight probable and six possible. Five major categories emerged: (i) encephalopathies ($n = 10$) with delirium/psychosis and no distinct MRI or CSF abnormalities, and with 9/10 making a full or partial recovery with supportive care only; (ii) inflammatory CNS syndromes ($n = 12$) including encephalitis ($n = 2$, para- or post-infectious), acute disseminated

encephalomyelitis (n = 9), with haemorrhage in five, necrosis in one, and myelitis in two, and isolated myelitis (n = 1). Of these, 10 were treated with corticosteroids, and three of these patients also received intravenous immunoglobulin; one made a full recovery, 10 of 12 made a partial recovery, and one patient died; (iii) ischaemic strokes (n = 8) associated with a pro-thrombotic state (four with pulmonary thromboembolism), one of whom died; (iv) peripheral neurological disorders (n = 8), seven with Guillain-Barré syndrome, one with brachial plexopathy, six of eight making a partial and ongoing recovery; and (v) five patients with miscellaneous central disorders who did not fit these categories. SARS-CoV-2 infection is associated with a wide spectrum of neurological syndromes affecting the whole neuraxis, including the cerebral vasculature and, in some cases, responding to immunotherapies. The high incidence of acute disseminated encephalomyelitis, particularly with haemorrhagic change, is striking. This complication was not related to the severity of the respiratory COVID-19 disease. Early recognition, investigation and management of COVID-19-related neurological disease is challenging. Further clinical, neuroradiological, biomarker and neuropathological studies are essential to determine the underlying pathobiological mechanisms, which will guide treatment. Longitudinal follow-up studies will be necessary to ascertain the long-term neurological and neuropsychological consequences of this pandemic."

[Clin Infect Dis](#): Direct evidence of active SARS-CoV-2 replication in the intestine (08 July 2020)

"Currently, there is no direct evidence to prove the active SARS-CoV-2 replication in the intestinal tract and relevant pathological changes in the colon and rectum. We investigated the presence of virions and pathological changes in surgical rectal tissues of a clinically confirmed COVID-19 patient with rectal adenocarcinoma.

Here, the clinical data were collected during hospitalization and follow-up of this patient. Quantitative RT-PCR was performed on the rectal tissue specimens obtained from surgical resection, succus entericus and intestinal mucosa of ileostomy, and rectal mucosa during follow-up after recovery. Ultrathin sections of surgical samples were observed for SARS-CoV-2 virions using electron microscopy. Histopathological examination was performed using hematoxylin-eosin stain. Immunohistochemical analysis and immunofluorescence were carried out on rectal tissues to evaluate the distribution of SARS-CoV-2 antigen, and immune cell infiltrations.

The patient had fever and cough on day 3 postoperatively, was diagnosed with COVID-19 on day 7, and was discharged from the hospital on day 41. RNA of SARS-CoV-2 was detected in surgically resected rectal specimens, but not in samples collected on 37 day after discharge. Notably, coincidence with rectal tissues of surgical specimens tested nucleic acid positive for SARS-CoV-2, typical coronavirus virions in rectal tissue were observed under electron microscopy. Moreover, abundant lymphocytes and macrophages (some are SARS-CoV-2 positive) infiltrating the lamina propria were found with no significant mucosal damage.

We firstly reported that direct evidence of the active SARS-CoV-2 replication in the patient's rectum during the incubation period, which might explain SARS-CoV-2 fecal-oral transmission."

[Clin Infect Dis](#): Statewide Interventions and Covid-19 Mortality in the United States: An Observational Study (08 July 2020)

"To determine whether later distancing interventions were associated with higher mortality, we performed a state-level analysis in 55,146 Covid-19 non-survivors. We tested the association between timing of emergency declarations and school closures with 28-day mortality using multivariable negative binomial regression. Day 1 for each state was set to when they recorded ≥ 10 deaths. We performed sensitivity analyses to test model assumptions.

At time of analysis, 37 of 50 states had ≥ 10 deaths and 28 follow-up days. Both later emergency declaration (adjusted mortality rate ratio [aMRR] 1.05 per day delay, 95% CI 1.00 to 1.09, $p=0.040$) and later school closure (aMRR 1.05, 95% CI 1.01 to 1.09, $p=0.008$) were associated with more deaths. When assessing all 50 states and setting day 1 to the day a state recorded its first death, delays in declaring an emergency (aMRR 1.05, 95% CI 1.01 to 1.09, $p=0.020$) or closing schools (aMRR 1.06, 95% CI 1.03 to 1.09, $p<0.001$) were associated with more deaths. Results were unchanged when excluding New York and New Jersey.

Later statewide emergency declarations and school closure were associated with higher Covid-19 mortality. Each day of delay increased mortality risk 5 to 6%."

[JAMA Netw Open](#): Clinical Characteristics of Patients With Coronavirus Disease 2019 (COVID-19) Receiving Emergency Medical Services in King County, Washington (08 July 2020)

"Question: What is the clinical presentation to emergency medical services among persons with coronavirus disease 2019 (COVID-19)?

Findings: This cohort study of 124 patients with COVID-19 revealed that most patients with COVID-19 presenting to emergency medical services were older and had multiple chronic health conditions. Initial concern, symptoms, and examination findings were heterogeneous and not consistently characterized as febrile respiratory illness.

Meaning: The findings of this study suggest that the conventional description of febrile respiratory illness may not adequately identify COVID-19 in the prehospital emergency setting."

[Nature](#): OpenSAFELY: factors associated with COVID-19 death in 17 million patients (08 July 2020)

"COVID-19 has rapidly affected mortality worldwide. There is unprecedented urgency to understand who is most at risk of severe outcomes, requiring new approaches for timely analysis of large datasets. Working on behalf of NHS England, here we created OpenSAFELY:

a secure health analytics platform covering 40% of all patients in England, holding patient data within the existing data centre of a major primary care electronic health records vendor. Primary care records of 17,278,392 adults were pseudonymously linked to 10,926 COVID-19-related deaths. COVID-19-related death was associated with: being male (hazard ratio (HR) 1.59, 95% confidence interval (CI) 1.53–1.65); older age and deprivation (both with a strong gradient); diabetes; severe asthma; and various other medical conditions. Compared with people with white ethnicity, Black and South Asian people were at higher risk even after adjustment for other factors (HR 1.48, 1.30–1.69 and 1.44, 1.32–1.58, respectively). We have quantified a range of clinical risk factors for COVID-19-related death in the largest cohort study conducted by any country to date. OpenSAFELY is rapidly adding further patients' records; we will update and extend results regularly."

[J Am Geriatr Soc](#): Recurrence or Relapse of COVID -19 in Older Patients: A Description of Three Cases. (07 July 2020)

"The coronavirus disease 2019 (COVID-19) has infected millions of people worldwide, particularly in older adults. The first cases of possible re-infection by SARS-CoV-2 were reported in April 2020 among older adults.

In this brief report, we present three geriatric cases with two episodes of SARS-CoV-2 infection separated by a symptom-free interval."

[JAMA Surg](#): Restructuring of a General Surgery Residency Program in an Epicenter of the Coronavirus Disease 2019 Pandemic: Lessons From New York City (07 July 2020)

"On March 1, 2020, the first case of coronavirus disease 2019 (COVID-19) was confirmed in New York, New York. Since then, the city has emerged as an epicenter for the ongoing pandemic in the US. To meet the anticipated demand caused by the predicted surge of patients with COVID-19, the Department of Surgery at NewYork-Presbyterian Hospital/Weill Cornell Medicine developed and executed an emergent restructuring of general surgery resident teams and educational infrastructure. The restructuring of surgical services described in this Special Communication details the methodology used to safely deploy the necessary amount of the resident workforce to support pandemic efforts while maintaining staffing for emergency surgical care, limiting unnecessary exposure of residents to infection risk, effectively placing residents in critical care units, and maintaining surgical education and board eligibility for the training program as a whole."

[PNAS](#): The implications of silent transmission for the control of COVID-19 outbreaks (06 July 2020)

"Since the emergence of coronavirus disease 2019 (COVID-19), unprecedented movement restrictions and social distancing measures have been implemented worldwide. The socioeconomic repercussions have fueled calls to lift these measures. In the absence of population-wide restrictions, isolation of infected individuals is key to curtailing

transmission. However, the effectiveness of symptom-based isolation in preventing a resurgence depends on the extent of presymptomatic and asymptomatic transmission. We evaluate the contribution of presymptomatic and asymptomatic transmission based on recent individual-level data regarding infectiousness prior to symptom onset and the asymptomatic proportion among all infections. We found that the majority of incidences may be attributable to silent transmission from a combination of the presymptomatic stage and asymptomatic infections. Consequently, even if all symptomatic cases are isolated, a vast outbreak may nonetheless unfold. We further quantified the effect of isolating silent infections in addition to symptomatic cases, finding that over one-third of silent infections must be isolated to suppress a future outbreak below 1% of the population. Our results indicate that symptom-based isolation must be supplemented by rapid contact tracing and testing that identifies asymptomatic and presymptomatic cases, in order to safely lift current restrictions and minimize the risk of resurgence."

[Infect Control Hosp Epidemiol](#): Brief Report of Co-infections with SARS-CoV-2 and Other Respiratory Pathogens (03 July 2020)

"During the observed period, 2535 specimens were simultaneously tested for SARS-CoV-2 and RP [respiratory panel] pathogens on 2458 symptomatic patients. The overwhelming majority of tests were collected in the Emergency Department (47.9%, 1214/2535) or while inpatient (40.1%, 1042/2535). Overall, 459 (18.1%) were positive for SARS-CoV-2 and 364 (14.4%) were positive for at least one RP pathogen. The most common RP pathogens found were rhinovirus/enterovirus (7.1%), influenza A (2.1%), coronavirus NL63 (2.1%), and human metapneumovirus (2.0%)....

Our results suggest that infection with other respiratory pathogens is uncommon among patients with COVID-19. Notably the median age of co-infected patients was nearly 20 years younger than those only infected with SARS-CoV-2. This observation is consistent with established literature that community-acquired viral coinfections are more common in younger populations."

ICYMI: Older Articles

[Emerg Infect Dis](#): Large SARS-CoV-2 Outbreak Caused by Asymptomatic Traveler, China (30 June 2020)

"An asymptomatic person infected with severe acute respiratory syndrome coronavirus 2 returned to Heilongjiang Province, China, after international travel. The traveler's neighbor became infected and generated a cluster of >71 cases, including cases in 2 hospitals. Genome sequences of the virus were distinct from viral genomes previously circulating in China."

Preprints—not yet peer-reviewed papers

[arXiv](#), [bioRxiv](#), and [medRxiv](#) are preprint servers: "[T]hese are preliminary reports that have not been peer-reviewed. They should not be relied on to guide clinical practice or health-related behavior and should not be reported in news media as established information."

[medRxiv](#): Digestive Manifestations in Patients Hospitalized with COVID-19 (09 July 2020)

"The prevalence and significance of digestive manifestations in COVID-19 remain uncertain.

Consecutive patients hospitalized with COVID-19 were identified across a geographically diverse alliance of medical centers in North America. Data pertaining to baseline characteristics, symptomatology, laboratory assessment, imaging, and endoscopic findings from the time of symptom onset until discharge or death were manually abstracted from electronic health records to characterize the prevalence, spectrum, and severity of digestive manifestations. Regression analyses were performed to evaluate the association between digestive manifestations and severe outcomes related to COVID-19.

A total of 1992 patients across 36 centers met eligibility criteria and were included. Overall, 53% of patients experienced at least one gastrointestinal symptom at any time during their illness, most commonly diarrhea (34%), nausea (27%), vomiting (16%), and abdominal pain (11%). In 74% of cases, gastrointestinal symptoms were judged to be mild. In total, 35% of patients developed an abnormal alanine aminotransferase or total bilirubin level; these were elevated to less than 5 times the upper limit of normal in 77% of cases. After adjusting for potential confounders, the presence of gastrointestinal symptoms at any time (odds ratio 0.93, 95% confidence interval 0.76-1.15) or liver test abnormalities on admission (odds ratio 1.31, 95% confidence interval 0.80-2.12) were not independently associated with mechanical ventilation or death.

Among patients hospitalized with COVID-19, gastrointestinal symptoms and liver test abnormalities were common but the majority were mild and their presence was not associated with a more severe clinical course."

Special Report

[JHCHS](#): The Public's Role in COVID-19 Vaccination: Planning Recommendations Informed by Design Thinking and the Social, Behavioral, and Communication Sciences (09 July 2020)

"This report considers human factors in relation to future vaccines against the novel coronavirus (SARS-CoV-2), drawing on insights from design thinking and the social, behavioral, and communication sciences. It provides recommendations—directed to both US policymakers and practitioners, as well as nontraditional partners new to public health's mission of vaccination—on how to advance public understanding of, access to, and acceptance of vaccines that protect against COVID-19."

Upcoming Calls and Webinars

TOPIC: Clinical Management of Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with Coronavirus Disease 2019 (COVID-19)

"During this COCA Call, clinicians will learn about clinical management of multisystem inflammatory syndrome in children (MIS-C) associated with Coronavirus Disease 2019 (COVID-19). Clinicians will share their experiences treating patients with MIS-C, present treatment details from published literature on patients with MIS-C, and provide an overview of the treatment guidelines published by the American College of Rheumatology."

WHEN: Thursday, 16 JULY 2020 1400 – 1500 EDT

FROM: CDC Clinician Outreach and Communication Activity (COCA)

CALL DETAILS: https://emergency.cdc.gov/coca/calls/2020/callinfo_071620.asp

TOPIC: Use of Telemedicine in Alternate Care Sites

"The COVID-19 pandemic and the associated community mitigation efforts enacted have altered the delivery of and access to healthcare across the U.S. Healthcare providers are looking for new and innovative ways to deliver patient care to accommodate social distancing and community mitigation measures. The use of telemedicine has grown significantly in recent months. In addition to being used by outpatient providers, telemedicine plays an integral role in Alternate Care Sites (ACS). ACS are one of many alternate care strategies intended to provide additional hospital surge capacity and capability.

HHS ASPR and ASPR TRACIE are hosting this webinar where speakers will discuss operations, management, and lessons learned from using telemedicine in these settings."

WHEN: Tuesday, 28 JULY 2020 1400 – 1515 EDT

FROM: U.S. Department of Health & Human Services (HHS) Assistant Secretary for Preparedness and Response (ASPR) Technical Resources, Assistance Center, and Information Exchange (TRACIE)

REGISTER: <https://register.gotowebinar.com/register/6169046790557289485>

News in Brief

"Mounting evidence suggests coronavirus is airborne — but health advice has not caught up" ([Nature](#)).

The WHO is acknowledging airborne coronavirus indoors and asymptomatic transmission ([NYT](#)).

WHO Director-General Tedros Adhanom Ghebreyesus: 'How is it difficult for humans to unite and fight a common enemy that is killing people indiscriminately?' ([NPR](#))

The WHO will have an independent review of the international response to the coronavirus pandemic ([STAT](#)).

Treatment and Aftermath

Some COVID patients have symptoms for months ([STAT](#)).

The pandemic has highlighted the need for palliative care planning and having difficult conversations with loved ones early ([NPR](#)).

"It takes a special kind of inattention to human suffering to not notice how unfortunate it is that people have been left to face death alone" ([Atlantic](#)).

Reopening Issues

Since states have reopened, coronavirus cases have increased dramatically—for example, they are up 1,393% in Florida and 1,491% in Idaho ([NYT](#)).

Some experts are calling for more shutdowns and stay-at-home orders to gain control over coronavirus outbreaks ([WashPo](#)).

Months into the pandemic and with new surges of cases, the US still hasn't solved the problem of PPE shortages ([NYT](#)).

A group of Boston-based bioengineers have designed a N95 mask that can be sterilized for reuse ([Beckers](#); see [BMJ Open](#) for full text article).

Research and Vaccines

NIH has launched the COVID-19 Prevention Trials Network (COVPN); the initiative "aims to enroll thousands of volunteers in large-scale clinical trials testing a variety of investigational vaccines and monoclonal antibodies intended to protect people from COVID-19" ([NIH](#)).

"When a vaccine hits the market, it will be a key tool in putting an end to the pandemic. A federal committee is debating giving early access to groups that face a high risk" ([NYT](#)).

Ripple Effects

Lessons from past outbreaks need to inform how we handle the social and economic impacts of COVID-19 on women in particular ([Nature](#)).

"Reeling from the loss of gas tax revenue during pandemic, states are deferring billions of dollars of transportation projects" ([WashPo](#)).

Public health officials and pandemic experts are at serious risk of burnout ([Atlantic](#)).

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